**I Have an Invention – What Should I do?**

**Market research & validation**

If there is something potentially protectable, you should check to see the idea fulfills a need (i.e. someone would buy your product because it solves a problem in a beneficial manner), and that you are able to perhaps secure a patent.

As a student taking a design class, your IP would typically belong to you and not be owned by the university. With respect to patenting work, before going ahead with anything (since it is expensive), I recommend that you do a little market assessment to help verify there is a market need. Does your idea solve a problem and meet a need in the market place? What technologies are you competing against? Does your solution have benefits that would allow you to compete with alternatives (or potentially displace them)? Can it be cheaper or save money, can it operate more reliably, or consume less power? Advantages and benefits that are of importance may differ according to the industry you are addressing. If you believe your idea has advantages and that folks may have interest, you might want to file for patent protection.

From a marketing perspective, are you able to produce a high level overview of your idea without giving away the details? Or will you need to share all details for someone to understand? If you are able to describe your invention in terms that do not give away the key invention, you may be able to talk with outside companies and people to validate whether or not you have something worth pursuing. While they may want more information, sharing too much too soon could jeopardise your ability to file a patent application. You will need to figure out what you are comfortable sharing that helps show you have a solution to a problem.

**Technical (IP) research**

Before committing to filing, you might want to carry out some literature and patent searches to see what is out there. Google Scholar and Google Patents are reasonable search tools for being able to get a first take on things. However, if you wanted to do a more specific patent search, then other than Google Patents (or just Google), I’d recommend the European patent office search engine as a very comprehensive one. A link to their search site is <http://worldwide.espacenet.com/> and you can select a search (e.g. an advanced search), which has a structure to allow you to find search terms in different fields (e.g. a title or an abstract). Another search tool is from WIPO - <https://patentscope.wipo.int/search/en/search.jsf> and you can search using a simple search, advanced search etc (from the search button). For literature searches, you can use Google Scholar, or go to [lib.asu.edu](http://lib.asu.edu/). Web of Science is a very useful literature research tool. Of course, Google is very good too (at least for a first pass search) but you may need to think about key search terms and structure several searches to do some research.  Details on patent filing are provided further down.

**ASU entrepreneurial resources for students**

The Edson initiative provides funding for student entrepreneurs. Additional details are available from <https://entrepreneurship.asu.edu/edson>. Each year, a competition is held, with a submission deadline date of April 1st and chosen projects expected to begin a few months later. You can click on “contact” at the bottom of the page and you can email queries to entrepreneurship@asu.edu. They have several staff who can explain the application process in more detail, as well as other resources you may be able to take advantage of as student entrepreneurs. For details of resources available at ASU, you can visit their website at <https://entrepreneurship.asu.edu/resources>. It’s usually good to talk to someone to figure out exactly how to take advantage of these offerings.

**Patent filing**

Filing a provisional (and indeed non provisional) can be done at low cost if done yourself. A provisional application, which lasts 12 months, can secure a priority date and the formal requirements are a little less than for a non-provisional application. Any non-provisional application would need to be filed within 12 months of the provisional filing date, in order to benefit from the priority date associated with the provisional. There is an art to writing patent documents, and patent lawyers and patent agents can assist in filing a patent and in the subsequent steps of patent examination, overcoming pitfalls in the process. Legal language used in patents is different from technical language used by engineers. There are similarities but also significant differences. While a small investment in a provisional application is a small risk, if you are serious about getting a robust application, you may need to do significant research yourself or take on someone (such as a patent lawyer or agent) to assist, which comes at a cost. Whether or not the cost is worth it would depend on the marketability of the idea - something affected by what existing folks are doing, what you offer and how broadly it can be protected. If narrowly protectable, and a process that can be engineered around, the patent value goes down. If you wanted to take on a law firm, they might ask for a retainer to carry out the work - it could be a few thousand dollars to begin the formal IP protection process.

If you do want to go ahead and write and file it yourself, here is some information on patent applications and filing.

For patent filing, read this web page regarding the requirements for filing, and information on provisional patents (last 12 months) - <http://www.uspto.gov/patents/resources/types/provapp.jsp>

Here is a link on tips for writing a patent application - <http://inventors.about.com/od/patentsbasics/a/descriptions.htm>. It includes advice, such as looking at other patents to see how they are written. You may get ideas for how a patent application or issued patent broadens out the invention from the specific details of the particular way you have gone about the work. Also, perhaps think about your work in terms of functional blocks.  As an example, think about the concept of a device such as a fastener that could be used to attach to items. A fastener could be a hook upon which an object hangs and is attached to the other. Or it could be velcro. Or it could be a drawing pin, or a nail, or glue, or any other method that allows two objects to be attached to each other.

Here is a link to a book on patenting - <http://www.nolo.com/products/patent-it-yourself-pat.html> You could check to see if it is available for loan at ASU's library, or buy from Barnes and Noble or [Amazon.com](http://amazon.com/)

In any research you do to assess whether or not to file for patent protection, you may review patent applications and see how they put them together and then see which ones you like (from a style perspective) such that you’d feel more comfortable in putting together a description that can be broad and does not have any “danger words” that could limit the scope of any patent. There are definitely phrases to avoid and mistakes that can be made.

If you write something yourself, you may want to add a paragraph at the end of the specification along the following lines:

The above-described invention possesses numerous advantages as described herein. The invention in its broader aspects is not limited to the specific details, representative devices, and illustrative examples shown and described. Accordingly, departures may be made from such details without departing from the spirit or scope of the general inventive concept. This can help (along with providing alternatives for materials, geometries etc) in securing coverage that is broader than a specific example.

If you were to file yourself, then below, is some useful information regarding fees at the patent office and what you would need to do.

FEES:

1. Patent fee schedule has changed recently - an updated fee schedule is at <http://www.uspto.gov/web/offices/ac/qs/ope/fee010114.htm> and it periodically updates.

2. As an individual, you may qualify for micro-entity status depending on certain factors. If not micro-entity, you would be a small entity. I can explain more

3. There appears to be a surcharge for paper filing (via mail) as opposed to electronic filing.

If you are going to do this yourself, here is some information from the USPTO website:

The old school method via paper requires:

1. Initial step to file a provisional application - fee code 1005/2005/3005. A large company beyond a certain size would pay a higher fee. If you have more than 100 pages describing the invention, you could pay more. The fee page would allow you to calculate fees.

2. Patent fee transmittal form <http://www.uspto.gov/forms/sb0017.pdf> - lists the fees for different types of filings.

3. Cover sheet for patent submittal - <http://www.uspto.gov/web/forms/sb0016_fill.pdf> Note that the fees on this form may not have been updated. The cover sheet should include the following information

 • indicate the application as a provisional application for patent;

 • the name(s) of all inventors

 • inventor residence(s)

 • title of the invention

 • name and registration number of attorney or agent and docket number (if applicable) (if you file yourself, there is no info for this field)

 • correspondence address

 • any US Government agency that has a property interest in the application.

The cover sheet link itself indicates a provisional application. The correspondence address would be your address. The mailing address to send the patent to is listed on the form.

4. Credit card payment form PTO-2038 - <http://www.uspto.gov/web/forms/2038.pdf>

5. You could include a self-addressed postcard

5. Mail the application and filing fee to:

Commissioner for Patents

P. O. Box 1450

Alexandria, VA 22313-1450

Alternatively, there is an online submission process - details available at <http://www.uspto.gov/patents/process/file/efs/index.jsp>

You may be an unregistered e-filer or could get a registration number, but I have not looked into this.

They may provide advice about file formats (e.g. PDF). Not all PDF files are created equal, and there can be issues with figures and fonts such that not all files will upload when submitting documents to the USPTO. Two ways we know of creating a USPTO-compatible PDF file are using CutePDF on a PC to print to file, or using Preview on a Mac, and printing to file. Adobe Acrobat Pro likely has options too.